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ABSTRACT

This chapter examines the role that instructional development (ID) can, does, and should play in the public school library program, particularly the ID activities that can be undertaken by the school library media specialist (LMS). The LMS literature is examined to determine the extent to which ID activities are considered, and a factor analysis study is performed to identify the ID activities undertaken by media specialists. An ID diffusion model is presented that is designed to increase the ID activities appropriate for the LMS to perform, and those activities that are not considered appropriate for the LMS to perform are indicated. Recommendations are made for changing the LMS training program, increasing the ID training received by LMS students, and facilitating ID interaction between teachers and media specialists. The text is supplemented by four figures and three tables. (36 references) (Author/EW)

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D. PUBLIC SCHOOLS

Chapter 40

ID and the LMS: Past, Present, Future

Philip Michael Turner

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Instructional Development, sometimes under other names, has been widely accepted in industry, the military, health fields and higher education. Little is heard about it in the public schools. Why is this so, and what should be done about it?

The literature on school librarianship has evidenced an evolution in the role of the library media specialist (LMS) during the past several decades. Each succeeding standard increased the depth and breadth of this role, culminating in the 1975 standards, Media Programs: District and School (American Library Association, 1975) in which the LMS is encouraged to abandon the concept of passive service and to assume an active role in curriculum development.

The overwhelming majority of textbooks and other monographs that target the LMS contain references to the involvement of the LMS in the teaching and/or curricular development processes. Works by Hug (1975) and Chisholm and Ely (1979) are totally devoted to this concept.

There has been a steady appearance over the past two decades of articles espousing the virtues of including instructional design (ID), instructional development, curriculum involvement, teaching, and other related activities in the role of the LMS, with few negative or cautionary voices raised. A Delphi study by Jetter (1972) and a study by Pearson (1974) concluded that adding the practice of ID to the role of the LMS would be the next major innovation in the future of this field. In summary, at least for the past decade, the idea of a new role for the LMS, one that includes assisting in the design of instruction, has achieved very wide dissemination.

Despite the presence of an awareness of the new role of ID, the actual acceptance and adoption of the role seems to be much less widespread. Varying attitudes have been documented by a substantial number of studies carried out regarding role-perception and ID activities involving LMS's, teachers, and principals.

With respect to principal's and teacher's perceptions of the LMS as an instructional designer, studies by Lacock (1971), Cantor (1975), Pfister and Alexander (1976), Johnson (1977), and Willis (1979) reported predominantly negative attitudes toward this concept.

Results of studies investigating the attitude of the LMS toward taking on this role are also mixed. Kerr (1977), Loertscher (1973), and Johnson (1977) published results indicating a lack of acceptance by the LMS, while Leeper (1975), Larsen (1971), Cantor (1975), and Turner and Martin (1979a) found a more favorable response toward the performance of ID by the library media specialists in their populations.

Substantially fewer studies have been carried out regarding the actual performance of ID by the LMS. Willis (1971), Loertscher (1973), and Pfister and Alexander (1976) concluded that large numbers of library/media specialists were not performing ID with their teachers regularly. While Turner and Martin (1979b) found a similar lack of performance of higher-level ID, the LMS in their population

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reported widespread performance of "lower-level" ID.

Several studies have been performed to determine factors which could be related to the performance of ID by the LMS. Personality characteristics identified were role-taking ability, linked positively with attitude toward ID by Kerr (1977); extroversion, linked positively with involvement in curriculum work by Schultzetenberge (1970), negatively with allocation of responsibility to the LMS by Daniel (1974), and postively with amount of material circulated (Madaus, 1974). Other factors identified include LMS's undergraduate major (Schulzetenberge, 1970), teaching structure (Madaus, 1974), budget and principal's attitude (Larsen, 1971), and attitude of principal and of LMS (Leeper, 1975).

A careful reading of the previously-cited studies reveals a few consistent findings, with many that are either non-significant or inconsistent. None of the studies purported to isolate ID from other related activities or to generate a theoretical basis for the delineation of ID activities.

Turner and Martin (1979b) attempted to address this problem by identifying 28 activities which represented the scope of ID at the K-12 level, and also a continuum of complexity of tasks. Tasks were drawn from the Task Analysis Survey Instrument (American Library Association, 1969), from other literature, and from extensive correspondence with professionals in the field. The basis for the selection and inclusion of the activities was the definition of instructional development found in Educational Technology: A Definition and Glossary of Terms (Association for Educational Communications and Technology, 1977), which divides instructional development into six functions: Research-Theory, Design, Production, Evaluation-Selection, Logistics, and Utilization-Dissemination.

Construct validity of the instrument was investigated through the use of a factor analysis of the 28 activities. Six factors were found, four of which accounted for 91.3% of the variance and included 25 of the 28 activities. A study of the activities included within each factor permitted the assignment of factor-constructs of four of the six functions of instructional development as delineated in the AECT definition. The grouping of activities within the instrument, therefore, mirrored to a large extent the theoretical groupings proposed in the AECT definition.

Variables which had been identified in previous studies as possibly related to each other were utilized as independent variables. These included attitudes toward ID by the LMS and by the principal, self-competency ratings of the LMS, budget, planning time, type of assistance provided to the LMS, and the empathy trait of the LMS. Other variables were taken from investigations of the activities of teachers and principals.

The variables that were found to be related to the overall performance of instructional development were amount of planning time for teachers, budget, amount of production equipment available, number of professional journals read, self-reported competencies, empathy-trait score (see Turner, 1979a), principal's attitude toward the performance of ID by the LMS (see Turner, 1979b), and the attitude of the LMS; all of these related positively to reported performance. The number of student-helpers was the lone significant negative-correlated variable.

The independent variables were entered into a step-wide multiple regression calculation with factor-scores as dependent variables. As can be seen in Tables 40-1 - 40-4, the competency variables were consistently the most important variables, mentioned first in all four of the equations. The principal's attitude was loaded heavily both on the Design and the Evaluation-Selection factors.

Table 40-1. Multiple Regression Summary Table for Factor 1 (Evaluation-Selection).

Independent Variables	Multiple R	R Square	RSQ Change	Simple R
Total Competency	.5176	.2697	.2697	.5167
Number of hours assigned to media center	.5665	.3209	.0530	.1792
Number of design courses	.6194	.3836	.0627	-.0268
Principal's attitude	.6627	.4392	.0555	.2972
Number of education courses	.6861	.4707	.0314	.1352

Table 40-2. Multiple Regression Table for Factor 2 (Design).

Independent Variables	Multiple R	R Square	RSQ Change	Simple R
Total Competency	.6274	.3936	.3936	.6274
Principal's attitude	.6884	.4739	.0803	.4190
Total budget	.7222	.5216	.0476	.3024
Amount of time not assigned supervisory duties	.7482	.5599	.0383	.1664
Competency in design	.7757	.6081	.0419	.5290

Table 40-3. Multiple Regression Summary Table for Factor 3 (Production).

Independent Variables	Multiple R	R Square	RSQ Change	Simple R
Competency total	.4852	.2354	.2354	.4852
Parent volunteers	.5030	.3516	.1162	-.3052
Enrollment	.6274	.3937	.0420	-.0134
Amount of time not assigned supervisory tasks	.6447	.4157	.0219	.1709
Competency in traditional library skills	.6612	.4372	.0214	.3046
Competency in production	.6791	.4655	.0283	.3287

Table 40-4. Multiple Regression Summary Table for Factor 4 (Logistics).

Independent Variables	Multiple R	R Square	RSQ Change	Simple R
Competency in education	.4385	.1923	.1923	.4385
Number of production equipment items	.5734	.3288	.1365	.3781
Years of classroom experience	.6248	.3904	.0615	-.1504
Production budget	.6528	.4332	.0321	.3343
Student help	.6822	.4653	.0321	-.2449

Through an analysis of all of the studies, the profile of the LMS involved with teacher-clients in ID efforts emerges. This person possesses the requisite competencies; believes that ID should be included in daily activities; and appears to most of the teachers to share their values, beliefs, and experiences. In other words, a wide spectrum of ID is being performed at the K-12 level by the best-prepared library/media specialists at the best schools with the best principals. This excludes the majority of library/media specialists, who lack the preparation, the appropriate environmental factors, or the proper attitude for performing ID.

As competencies in ID seem to play an important role in the profile of the successful instructional designer, the preparation of library/media specialists seems worthy of investigation. Several studies of non-print media courses have been conducted, including Lieberman (1955), Totten and Mitchell (1973), and Prostano and Prostano (1979). None of these studies, however, addressed preparation specifically in terms of ID, nor did they mention this construct in their studies.

Stone and Turner (1980) investigated the preparation of the LMS at the Master's Degree level within 43 library schools in the Southeast. Information was collected concerning the location of instruction in 13 different ID competencies. The list of competencies examined was chosen from an analysis of frequently-cited models. Information was also collected concerning whether the competencies were required or were elective for this population.

Eighty-six percent of the institutions queried responded. Of those that responded, over half required either all of the competencies or none of the competencies. This finding leads to the conclusion that ID can be regarded as a single, atomistic, innovation in terms of its diffusion into library-school curricula in the Southeast.

The three competencies required most often were identification of terminal-performance objectives, identification of interim-performance objectives, and development of motivational activities. Since the first two are probably the most common of the "new" practices required of teachers, and the third is a standard topic in method courses, the fact that these three would be the most common ID competencies required in library-school curricula is not surprising.

The three competencies required least often were learner analysis, identification of learning-behaviors according to a prescribed taxonomy, and arrangement of objectives into a hierarchy. These are probably the most complex and theoretical activities of instructional designers, and it is not surprising that these competencies were not as widely evident in the preparation programs.

Further findings of this study included the establishment of a profile of the program that offered ID competencies in courses taught within the department. This description would include lack of accreditation by the American Library Association, the subsumption of the department within a school of education, with a high percentage of the students within the department pursuing certification as library/media specialists, as opposed to academic, public, or special-library careers. A further study included all accredited library schools in the United States (Turner, 1981) and has yielded similar findings.

The evidence presented thus far is a basis for the following conclusions:

1. ID as a significant part of the library/media specialist's role is solidly established by the literature of the field.
2. ID competencies are available in most LMS preparation programs and the requirement of the competencies has made a solid inroad into a substantial minority of these programs.
3. The LMS equipped with ID competencies and with philosophical and financial support is performing a wide range of ID tasks.

Based upon these conclusions, ID, as performed by the LMS, can be seen to be following a logical diffusion-pattern (see Figure 40-1) emanating from a solid literature base, into preparation programs, and finally, into the field.

What are actions that can be taken to continue or perhaps speed up the diffusion-process? The following are several possible actions:

1. Continue the trend of the last decade involving the dissemination, through the literature, of research results and theoretical writings to decision-makers in the LMS preparation-programs and to practitioners who read and utilize journal information.
2. Identify key works which reach large numbers of administrator-practitioners or trainees and make sure that the role of the LMS as instructional designer is included. The traditional role-descriptions found by Holzeberlein (1971) must be supplanted by a more up-to-date rendition.
3. Information pertaining to ID at the K-12 level should be disseminated through journals that reach teachers. Shoemaker (1978) found that of the 93 articles dealing with the LMS and the school curriculum, 83 were indexed in Library Literature and only 16 in Education Index.
4. The most significant action, upon which the remainder of this paper will focus, is a translation of the terminology inherent in the ID approach into terminology that is perceived to be relevant to LMS practitioners.

The question that must be asked is, "Is ID at the K-12 level sufficiently different from ID in industry, the military, and higher education to warrant a different aproach?" The answer is yes. The role of the LMS has already, in most cases,

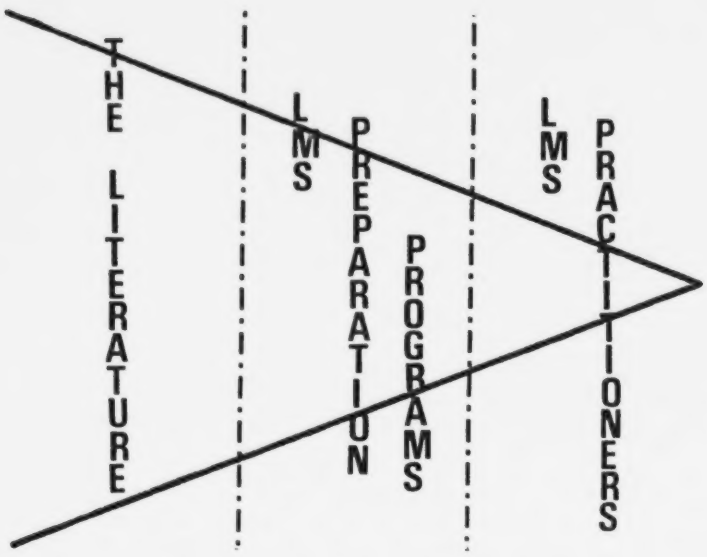

Figure 40-1. ID diffusion model.

been delineated and filled with traditional activities including typing catalog cards, teaching "library skills," preparing bibliographies, and conducting study halls. Unlike the complex instructional development projects found in the aforementioned areas, the LMS must make an effort to find time to conduct simple instructional design projects with teacher-clients while fulfilling other duties.

ID has traveled the dissemination route from the military, through higher education and industry, to arrive at the K-12 level with much of the terminology intact. The LMS about to begin an ID project is faced with a bewildering array of expectations and very few role-models.

The tension between the perception of the activities that are purported to be involved in ID and realities of the competencies possessed and the time available leads to a slow adoption rate. Even the LMS who possesses a positive attitude is often dissuaded from undertaking an ID project by her/his perception of the competencies and output required. At the conclusion of her report on the state of ID at the K-12 level, M. Grazier (1979) alludes to this problem:..."the extended yet flexible rule within the school now encourages the talented and discourages the meek."

The translation of standard ID into the vernacular of the practitioner would be expected to serve several purposes:

1. Help bridge the gap between many traditional fragmented activities and the interrelatedness inherent in the ID approach.
2. Help dissipate the belief that ID activities are totally foreign to "everyday" LMS activities.
3. Allay fears that ID requires competence beyond that of the "average" LMS.
4. Provide principals with evidence of a wide range of activities through which the LMS is directly involved in improving instruction.
5. Provide teachers with vastly increased avenues for interface with the LMS.
6. Provide the LMS with direct evidence of the role of the media program in meeting instructional objectives (see Turner and Counts, 1977).

The cornerstone of this elaboration on the ID model is the realization that the traditional model of ID (see Figure 40-2) is presented to the LMS as an ideal, and while it is a system and is usually regarded as a program to be worked continuously through,

1. The LMS need not interface with the teaching at EVERY step, and
2. The LMS need not interface with a teacher at the ideal level at ANY step.

The sine qua non of an LMS who has undertaken an ID role is the acceptance philosophically of the value of ID, an understanding of the ideal model, a realization of where any action fits into the model and a commitment to moving up the levels of involvement to reach the most effective and efficient level.

Steps toward this translation can be found in

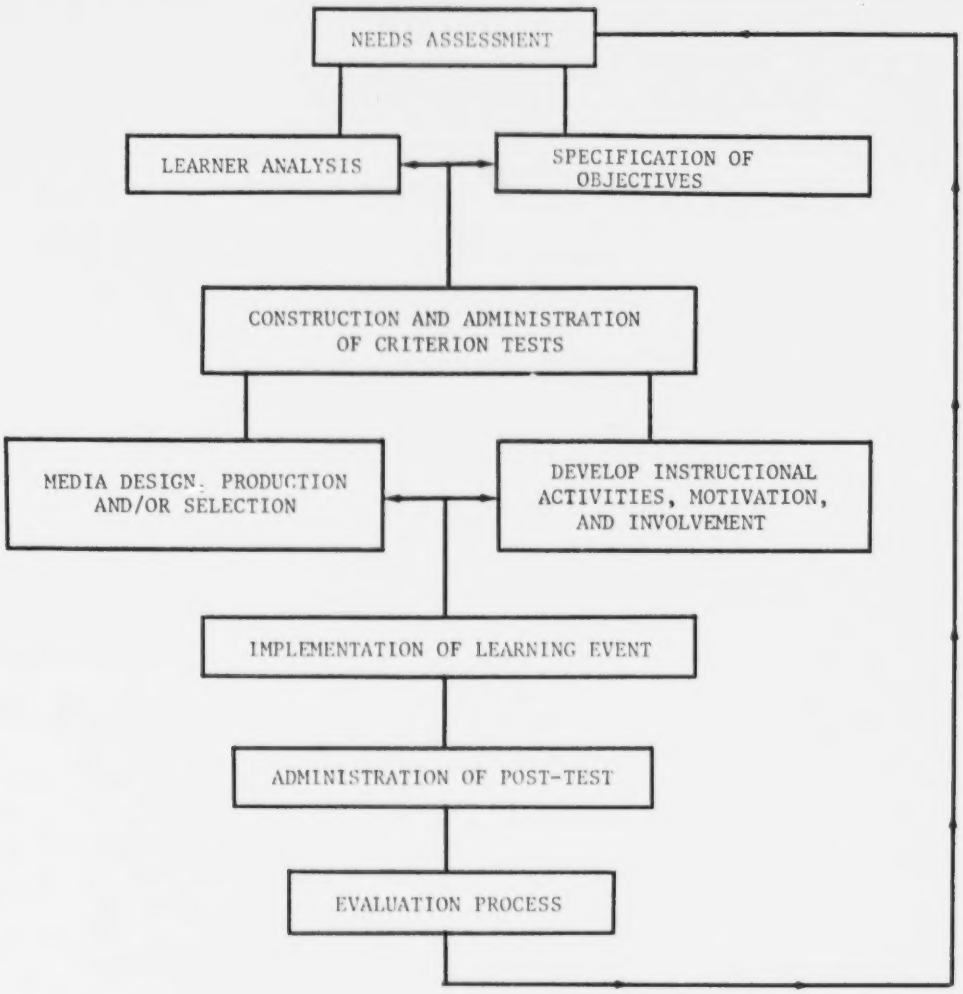

Figure 40-2. Traditional ID model.

the recent literature Loertscher (1980) has evolved a taxonomy of involvement in ID which details 10 levels, ranging from no involvement through full-blown ID (see Figure 40-3). Other attempts to provide practical ID models for the LMS are Pitts (1980), Sullivan (1980), and Naumer and Thurman (1981).

While the Loertscher model is useful in showing the LMS a path toward heavy involvement in ID, it underplays the ID process itself. What seems to be neded, and where the literature seems to be pointing, is an "ideal" model of ID supplemented with levels of approximation within each step.

A possible formulation of levels within each step would involve creating levels corresponding to non-involvement, passive participation (Loertscher, Level 2), reaction (Loertscher, Levels 3-6), and education (Loertscher, Levels 7-10). Figure 40-4 illustrates these levels for the needs-assessment and performance-objective steps in the ideal ID model. The levels within each stage represent a natural continuum culminating in the ideal performance level.

In the best of all worlds, all teachers would possess the competencies to arrive at the learning resources center having performed the requisite tasks as suggested by the ideal ID model. The task of the LMS would be to assist them in locating, evaluating/selecting, and producing materials and in identifying/implementing appropriate learning activities. In the real world, however, many teachers require assistance throughout the entire process.

Figure 40-3. LMC taxonomy of involvement in instructional units (Loertscher).

1. NO INVOLVEMENT
   By-passing the LMC entirely.

2. SELF-HELP WAREHOUSE
   Facilities and materials are available for the self starter.

3. INDIVIDUAL REFERENCE ASSISTANCE
   Students or teachers can request information or specific materials with no advance notice.

4. CURSORY PLANNING
   Informal and brief planning with teachers for LMC involvement usually done in the hall or teacher's lounge (gathering ideas for activities, new materials to use, Have you seen _____?, Can I get you a film?).

5. PRE-PLANNED GATHERING
   Gathering of materials done in advance of class project upon teacher request.

6. EVANGELISTIC OUTREACH
   A concerted effort to promote the multi-media individualized instruction philosophy (often leads to #8-10). (In-Service workshops to promote AV production and/or use of AV materials, teaching various uses of equipment and materials, teaching possibilities of a medium to suit various ability and interest levels, promoting the usefulness of high interest/low reading level books, promoting use of interdisciplinary materials.)

7. SCHEDULED PLANNING IN THE SUPPORT ROLE
   Formal plan with a teacher to supply materials or activities in response to an already planned unit. No involvement in goals or evaluation of the unit.

8. INSTRUCTIONAL DESIGN - LEVEL I (Still some detachment from the outline in terms of grading.)

9. INSTRUCTIONAL DESIGN - LEVEL II
   Same as nine with LMC staff participating in grading and feeling an equal responsibility with the teacher for learning.

The role of the LMS is not to perform the task for the teacher, but to assist the teacher wherever appropriate in the ID process. Ideally, with each interaction, an educational process will take place, until eventually the role of the LMS will consist of the above-stated activities. As an experienced LMS knows, however, there is little danger of working oneself out of a position in the foreseeable future. The task of becoming THE learning specialist in the school is a large one, but the attendant satisfactions are larger. Hesitation will result in others accepting the challenge, as witnessed by the growth of in-school curriculum consultants. With a rededication to an ID process that is presented in an approachable manner, the promise which first appeared almost two decades ago will be realized.

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Figure 40-4. Levels of involvement for the needs assessment and performance objective steps of the Ideal ID model.

	(IDEAL) DETERMINES GOALS AND NEEDS THROUGH A FORMAL NEEDS ASSESSMENT PROCEDURE
EDUCATION	Participates as an active member in the goal-setting process at all stages Acquaints the teacher with the concept of instructional needs and the processes used in deriving sound goals and needs.
REACTION	Upon request, helps to brainstorm, and to establish in priority, goals and needs; suggests sources of goals; collects information; contacts possible source persons; and/or designs instruments
PASSIVE PARTICIPATION	Maintains potential sources of goals, eg.: lists of resource persons from the school district, community, and local college or university; collections of past course syllabi; certification requirements; extant course materials; textbooks; and curriculum guides Not involved with teacher at this step
	(IDEAL) DERIVES TERMINAL AND ENABLING OBJECTIVES FROM GOAL STATEMENTS, IDENTIFIES AS TO TYPE OF LEARNING, AND ARRANGES IN A TEACHING HIERARCHY
EDUCATION	Participates regularly as a consultant in the derivation, identification, and the arrangement of performance objectives Acquaints teacher through workshops and consultation with the purpose and process of specifying and arranging performance objectives
REACTION	Upon request, assists in translating goals into objectives, deriving enabling objectives, classifying objectives, and/or arranging objectives into a teachable order
PASSIVE PARTICIPATION	Maintains a collection of previously formulated objectives on many topics Maintains a professional collection of works on performance objectives Not involved with teacher at this step

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